TEJUS
CONSULTANTS

Test Report on Cement

Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	M/s KRIDL
Sample ID	Cement
Date of Sample Tested	21.12.2018
Sample Supplied By	Agency

Sl.No.	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part-5)	38 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5)	345 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part-3) By the Le-Chatelier method	2mm	Not More than 10 mm
3	Standard Consistency	IS-4031 (Part-4)	27.00%	25 % to 35

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TEST REPORT

Clients	BRUHAT BENGALORE MAHANAGARA PALIKE
Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	M/s KRIDL

SPECIFIC GRAVITY AND WATER ABSORPTION

FINE AGGREGATE (IS-2386-PART-3)

Type of Material	Fine aggregate (River Sand/ M sand)	**Proposed Use**	PCC
Location/Source	At Site/Plant	**Date of Sampling**	21.12.2018
Period of Soaking	24 hours	**Date of Testing**	21.12.2018

Sl. No.	Test Property	TRIAL - 1	TRIAL - 2	TRIAL - 3	
A	Weight of sturated surface dry sample gm.	651	661	670	
B	Weight of oven - dry sample gm.	641	652	662	
C	Weight of Pycnometer Filled with water gm	1275	1275	1275	
D	Weight of Pycnometer + sample + water gm	1685	1690	1697	
E	Bulk specific gravity $\frac{B}{(C+A-D)}$	2.660	2.650	2.669	**2.660**
G	Absorption (%) $\frac{(A-B)*100}{B}$	1.560	1.380	1.208	**1.383**

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike
Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Consultants	Tejus Consultants, Bangalore
Contractor	M/s KRIDL

SIEVE ANALYSIS

Total Weight:	**3000** gms		
Type of Material	**Fine aggregate (River Sand/ M sand)**	**Proposed Use**	concrete
Sample Location	At Site/Plant	**Date of Sampling**	21.12.2018
		Date of Testing	21.12.2018

IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing (Zone-II)
10.00 mm	0	0	0	100.00	100
4.75 mm	214	214	7.13	92.87	90 - 100
2.36 mm	312	526	17.53	82.47	75 - 100
1.18 mm	322	848	28.27	71.73	55 - 90
0.600 mm	494	1342	44.73	55.27	35 -59
0.300 mm	780	2122	70.73	29.27	8-30
0.150 mm	632	2754	91.80	8.20	0 - 10
Pan	246	3000			-

Remarks : ✓ Satisfactory / Not Satisfactory

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TEST REPORT

Clients	Bruhath Bangalore Mahanagara Palike
Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	M/s KRIDL
Total Weight in gm:	3000

SIEVE ANALYSIS

Type of Material	40 mm down size	**Proposed Use**	PCC
Sample Location	At Site/Plant	**Date of Sampling**	21.12.2018
		Date of Testing	21.12.2018

IS Sieve Size	Weight Retained in gm	Cum. Weight Retained in gm	Cumulative Weight Retained in %	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA-2007) % of Passing For Graded Aggregate of Nominal Size
80.00mm	0	0	0.00	100.00	100
63.00mm	0	0	0.00	100.00	-
40.00mm	110	110	3.67	96.33	95-100
20.00mm	1362	1472	49.07	50.93	30-70
10.00mm	920	2392	79.73	20.27	10-35
4.75mm	480	2872	95.73	4.27	0-5
Pan	128	3000	100.00	0.00	

Remarks : ✓ Satisfactory / Not Satisfactory

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Test Report on Cement

Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	M/s KRIDL
Sample ID	Cement
Date of Sample Tested	01.01.2019
Sample Supplied By	Agency

Sl.No.	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part-5)	36 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5)	348 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part-3) By the Le-Chatelier method	4mm	Not More than 10 mm
3	Standard Consistency	IS-4031 (Part-4)	27.00%	25 % to 35

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TEST REPORT

Clients	BRUHAT BENGALORE MAHANAGARA PALIKE
Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	M/s KRIDL

SPECIFIC GRAVITY AND WATER ABSORPTION

FINE AGGREGATE (IS-2386-PART-3)

Type of Material	Fine aggregate (River Sand/ M sand)	Proposed Use	concrete
Location/Source	At Site/Plant	Date of Sampling	01.01.2019
Period of Soaking	24 hours	Date of Testing	01.01.2019

Sl. No.	Test Property		TRIAL - 1	TRIAL - 2	TRIAL - 3	
A	Weight of sturated surface dry sample gm.		652	665	660	
B	Weight of oven - dry sample gm.		641	655	648	
C	Weight of Pycnometer Filled with water gm		1275	1275	1275	
D	Weight of Pycnometer + sample + water gm		1686	1693	1691	
E	Bulk specific gravity	$\frac{B}{(C+A-D)}$	2.660	2.652	2.656	**2.656**
G	Absorption (%)	$\frac{(A-B)*100}{B}$	1.716	1.527	1.852	**1.698**

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike
Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Consultants	Tejus Consultants, Bangalore
Contractor	M/s KRIDL

SIEVE ANALYSIS

Total Weight:	**3000** gms		
Type of Material	**Fine aggregate (River Sand/ M sand)**	**Proposed Use**	concrete
Sample Location	At Site/Plant	**Date of Sampling**	01.01.2019
		Date of Testing	01.01.2019

IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing (Zone-II)
10.00 mm	0	0	0	100.00	**100**
4.75 mm	214	214	7.13	92.87	**90 - 100**
2.36 mm	308	522	17.40	82.60	**75 - 100**
1.18 mm	422	944	31.47	68.53	**55 - 90**
0.600 mm	476	1420	47.33	52.67	**35 -59**
0.300 mm	712	2132	71.07	28.93	**8-30**
0.150 mm	642	2774	92.47	7.53	**0 - 10**
Pan	226	3000			-

Remarks : Satisfactory / Not Satisfactory

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike	
Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli	
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	M/s KRIDL	
Total Weight:	10000	gms

SIEVE ANALYSIS

Type of Material	20 mm down size	**Proposed Use**	Concrete
Sample Location	Plant/At site	**Date of Sampling**	01.01.2019
		Date of Testing	01.01.2019

IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing
40.00 mm	0	0	0	100	**100**
20.00 mm	269	269	2.69	97.31	**95 - 100**
10.00 mm	4830	5099	50.99	49.01	**25 - 55**
4.75 mm	4223	9322	93.22	6.78	**0 - 10**
Pan	678	10000			

Remarks : ✓ Satisfactory / Not Satisfactory

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike				
Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli				
Consultants	TEJUS CONSULTANTS				
Contractor	M/s KRIDL				
Total Weight:	10000	gms			

SIEVE ANALYSIS

Type of Material	**12.5 mm down size**		**Proposed Use**	Concrete	
Sample Location	At Site/Plant		**Date of Sampling**	01.01.2019	
			Date of Testing	01.01.2019	
IS Sieve Size (in mm)	**Weight Retained**	**Cum. Weight Retained**	**Cum. % Retained**	**Cum. % Passing**	**Spec. Limit (%) Passing**
20.0	0	0	0	100	**100**
12.5	552	552	5.52	94.48	**90-100**
10.0	4620	5172	51.72	48.28	**40-85**
4.75	4550	9722	97.22	2.78	**0-10**
Pan	278	10000			

Remarks : ✓ Satisfactory / Not Satisfactory

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	M/s KRIDL
Grade of concrete:	M20
Size of cube:	150x150x150 mm
Reference IS code:	IS:516-1959

Sl.No.	Date of Casting	Date of testing	Age of Test	Weight of Cube	Area of Cube	Failure load	Compressive strength	Avg. Compressive strength
				Kg	mm^2	KN	N/mm^2	N/mm^2
1	01.01.2019	08.01.2019	7 days	8.120	22500	281	12.49	12.56
2	01.01.2019	08.01.2019	7 days	8.128	22500	283	12.58	
3	01.01.2019	08.01.2019	7 days	8.126	22500	284	12.62	

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TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	M/s KRIDL
Grade of concrete:	M20
Size of cube:	150x150x150 mm
Reference IS code:	IS:516-1959

Sl.No.	Date of Casting	Date of testing	Age of Test	Weight of Cube	Area of Cube	Failure load	Compressive strength	Avg. Compressive strength
				Kg	mm^2	KN	N/mm^2	N/mm^2
1	01.01.2019	29.01.2019	28days	8.130	22500	451	20.04	20.10
2	01.01.2019	29.01.2019	28days	8.128	22500	452	20.09	
3	01.01.2019	29.01.2019	28days	8.128	22500	454	20.18	

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Test Report on Cement

Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Client	Bruhat Bangalore Mahanagar Palike
Consultant	TEJUS CONSULTANTS
Contractor	M/s KRIDL
Sample ID	Cement
Date of Sample Tested	02.01.2019
Sample Supplied By	Agency

Sl.No.	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 12269-1987
1	a) Initial Setting Time	IS-4031 (Part-5)	39Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part-5)	352 Minutes	Not More than 600 Minutes
2	Soundness	IS-4031 (Part-3) By the Le-Chatelier method	3mm	Not More than 10 mm
3	Standard Consistency	IS-4031 (Part-4)	27.00%	25 % to 35

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TEST REPORT

Clients	BRUHAT BENGALORE MAHANAGARA PALIKE
Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore
Contractor	M/s KRIDL

SPECIFIC GRAVITY AND WATER ABSORPTION

FINE AGGREGATE (IS-2386-PART-3)

Type of Material	Fine aggregate (River Sand/ M sand)	Proposed Use	concrete
Location/Source	At Site/Plant	Date of Sampling	02.01.2019
Period of Soaking	24 hours	Date of Testing	02.01.2019

Sl. No.	Test Property		TRIAL - 1	TRIAL - 2	TRIAL - 3	
A	Weight of sturated surface dry sample gm.		660	670	665	
B	Weight of oven - dry sample gm.		651	660	655	
C	Weight of Pycnometer Filled with water gm		1275	1275	1275	
D	Weight of Pycnometer + sample + water gm		1690	1696	1693	
E	Bulk specific gravity	B / (C + A - D)	2.657	2.651	2.652	**2.653**
G	Absorption (%)	(A - B) *100 / B	1.382	1.515	1.527	**1.475**

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike
Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli
Consultants	Tejus Consultants, Bangalore
Contractor	M/s KRIDL

SIEVE ANALYSIS

Total Weight:	**3000** gms		
Type of Material	**Fine aggregate (River Sand/ M sand)**	**Proposed Use**	concrete
Sample Location	At Site/Plant	**Date of Sampling**	02.01.2019
		Date of Testing	02.01.2019

IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing (Zone-II)
10.00 mm	0	0	0	100.00	**100**
4.75 mm	210	210	7.00	93.00	**90 - 100**
2.36 mm	308	518	17.27	82.73	**75 - 100**
1.18 mm	421	939	31.30	68.70	**55 - 90**
0.600 mm	476	1415	47.17	52.83	**35 -59**
0.300 mm	722	2137	71.23	28.77	**8-30**
0.150 mm	630	2767	92.23	7.77	**0 - 10**
Pan	233	3000			-

Remarks : ✓ Satisfactory / Not Satisfactory

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TEST REPORT

Clients	Bruhat Bangalore Mahanagara Palike	
Project	Improvements to roads and drains at Kodigehalli village from 1st to 3rd cross and other roads in ward No. 08, Kodigehalli	
Consultants	TEJUS CONSULTANTS Basaveshwar Nagar Bangalore	
Contractor	M/s KRIDL	
Total Weight:	10000	gms

SIEVE ANALYSIS

Type of Material	20 mm down size	**Proposed Use**	Concrete
Sample Location	Plant/At site	**Date of Sampling**	02.01.2019
		Date of Testing	02.01.2019

IS Sieve Size	Weight Retained	Cum. Weight Retained	Cum. % Retained	Cum. % Passing	Spec. Limit (%) Passing
40.00 mm	0	0	0	100	100
20.00 mm	27	27	0.27	99.73	95 - 100
10.00 mm	4830	4857	48.57	51.43	25 - 55
4.75 mm	4223	9080	90.80	9.20	0 - 10
Pan	920	10000			

Remarks : ✓ Satisfactory / Not Satisfactory

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